



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460  
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION  
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

FEE

DOCUMENT CONTAINS CONFIDENTIAL BUSINESS INFORMATION

DP BARCODE No.: D462165 FILE SYMBOL/REG. No.: 87373-RRL; PRODUCT NAME: ARG Metolachlor Technical; DECISION No.: 567931; PC Code(s): 108801; ACTION CODE: R334; FOOD Use: Yes; REGISTRANT: Argite, LLC; e-Submission #/Submission #: 57359 / 1060306

DATE: January 27, 2022

SUBJECT: Summary of Product Chemistry Review of "ARG Metolachlor Technical"

FROM: Shyam Mathur, *sbmathur* 02-02-2022  
Product Chemistry Team Leader  
CITAB/RD (7505P)

THROUGH: Kerry Leifer, Branch Chief, *Leifer, Kerry* Digitally signed  
CITAB/RD (7505P) by Leifer, Kerry  
Date: 2022.02.03  
09:32:42 -05'00'

TO: Julia Kerr / Mindy Ondish, PM 25  
Herbicide Branch / RD (7505P)

Active Ingredient(s): 97.00%  
Product label Claim : 97.0.0%

**\*Product ingredient source information may be entitled to confidential treatment\***

Proposed Basic CSF : Dated: 07-01-2020(97.00%)

Production site: [REDACTED]

Proposed Alt CCSF #1: Dated:07-01-2020 (97.7%)

Production site: [REDACTED]

Proposed Alt CSF #2: Dated: 07-01-2020 (98.3%)

Production site: [REDACTED]

MRID No(s): Submitted – 51189601 - (830.1550, -1600, -1620, -1670, -1750 for all three sites)

51189602 - (830.1700, 830.1800 - Basic CSF - [REDACTED])

51189603 - (830.1700, 830.1800 - Alt CSF #1 - [REDACTED])

51189604 - (830.1700, 830.800 - Alt CSF #2 - [REDACTED])

51189605 to 51189611 – Group B data (Physical chemical properties).

CONCLUSION:

**Group A: Acceptable.** All required data submitted to support the proposed Basic CSF and Alt CSF's # 1 & # 2 (All dated: 07-01-2020)

**Group B. Acceptable.**

[Note: It is not clear storage stability (830.6317) & corrosion characteristics(830.6320) have been conducted using commercial packaging. If these studies have not been conducted using the proposed commercial containers, the registrant is expected to redo these studies using proposed commercial containers. One year at RT or accelerated studies (2 weeks at 54°C) can be generated].

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**CSF:**

**Proposed Basic CSF:** (97.00%, dated: July 1, 2020) – **Acceptable**

(Production site: [REDACTED])

(5-batch analysis report on Page # 19 of this report)

**Proposed Alt CSF #1:** (97.70%, dated: July 1, 2020) – **Acceptable**

(Production site: [REDACTED])

(5-batch analysis report on Page #23 of this report)

**Proposed Alt CSF #2:** (98.30%, dated July 1, 2020) – **Acceptable**

(Production site: [REDACTED])

(5-batch analysis report on Page #27 of this report)

Alternate CSF in compliance with 40CFR§152.43: Yes ☒; No ☐; NA ☐

Similarity to cited product with Reg. No.11603-43: Similar ☒; Not similar ☐; Identical ☐; Not applicable ☐

**Product label.** Recommendations: Yes ☐; No ☒; NA ☐

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830.1550 (product identity & composition) [MRID No. 51189601]

Common Name: Metolachlor

CAS Name: 2-chloro-*N*-(2-ethyl-6-methylphenyl)-*N*-(2-methoxy-1-methylethyl)acetamide

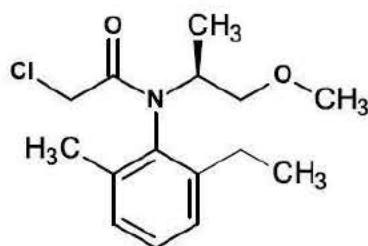
IUPAC Name: 2-chloro-6'-ethyl-*N*-(2-methoxy-1-methylethyl)aceto-*o*-toluidide

CAS No.: 51218-45-2

Molecular formula: C<sub>15</sub> H<sub>22</sub> Cl NO<sub>2</sub>

Molecular weight: 283.8

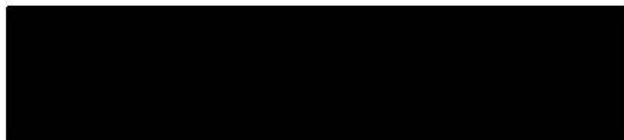
Structural formula:



Metolachlor

**\*Product ingredient source information may  
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**Manufacturing facilities (basic site) -**



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Group B Data: Physical-Chemical characteristics

Table 2: Physical and Chemical Properties for "ARG Metolachlor Technical"																									
CGLN	Requirement	MRID No	Status	Result or Deficiency																					
830.6302	Color	51189605	A	Orange-Brown color @ 25°C																					
830.6303	Physical state	51189605	A	Liquid @ 25°C																					
830.6304	Odor	51189605	A	Odorless @ 25°C																					
830.6313 830.6317	Stability to normal and elevated temperatures, metals, and metal ions	51189609	A	TS was found to be stable in contact with metal and metal ions (Al, and Fe metals and with their corresponding acetates salts) for 14 days at 54°C and also at RT																					
830.6314	Oxidation/reduction: chemical incompatibility	51189609	A	TS does not react vehemently with water, ammonium dihydrogen phosphate, Fe powder & kerosene. TS was found to be not compatible with KMnO <sub>4</sub>																					
830.6315	Flammability	51189610 (cited)	A	190°C Reference: C. D. S. Tomlin, "The Pesticide Manual", 13th Edition, p. 668, BCPC Publications, Hampshire, UK. 2003																					
830.6316	Explodability	51189610	A	<b>Waiver request.</b> Metolachlor does not have the chemical bonds or functional groups associated with explosive chemicals.																					
C830.6317	Accelerated storage stability	51189611	A	TS was found to be chemically & physically stable when stored in Zn coated iron bottles for two weeks at 54°C with respect Al contents.																					
830.6319	Miscibility	51189610	NA	Not labeled for dilution with petroleum solvents																					
830.6320	Accelerated Corrosion characteristics	51189611	A	TS was stored in Zn coated iron bottles for 2 weeks at 54°C, bottles did not show any signs of corrosion. The results revealed no significant change in physical or chemical property of the TS.																					
830.7000	pH	51189606	A	4.0 (1% aqueous suspension w/v) @ 20.0°C																					
830.7050	UV/Visible absorption	51189609	A	<table><tr><th>pH</th><th><math>\lambda_{max}(nm)</math></th><th>Molar Absorption coefficient <math>\log_{10}\epsilon</math></th></tr><tr><td>5.62</td><td>205</td><td>4.34</td></tr><tr><td></td><td>213</td><td>4.22</td></tr><tr><td>1.38</td><td>205</td><td>4.34</td></tr><tr><td></td><td>213</td><td>4.20</td></tr><tr><td>12.46</td><td>205</td><td>4.29</td></tr><tr><td></td><td>213</td><td>4.77</td></tr></table>	pH	$\lambda_{max}(nm)$	Molar Absorption coefficient $\log_{10}\epsilon$	5.62	205	4.34		213	4.22	1.38	205	4.34		213	4.20	12.46	205	4.29		213	4.77
pH	$\lambda_{max}(nm)$	Molar Absorption coefficient $\log_{10}\epsilon$																							
5.62	205	4.34																							
	213	4.22																							
1.38	205	4.34																							
	213	4.20																							
12.46	205	4.29																							
	213	4.77																							
830.7100	Viscosity	51189607	A	98.5 mPa. s @ 20°C 29.6 mPa. s @ 40°C																					
830.7200	Melting point	51189610 (cited)	A	-61.2°C Reference: C. D. S. Tomlin, "The Pesticide Manual", 13th Edition, p. 668, BCPC Publications, Hampshire, UK. 2003																					
830.7220	Boiling point	51189609	A	334.1°C																					
830.7300	Density	51189608	A	1.112 g/ml @ 20°C																					
830.7370	Dissociation constants in water (DC)	51189605	A	3.28 @20°C																					
830.7550	Partition coefficient	51189609	A	Log Po/w = 3.6 @ 25°C																					

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Table 2: Physical and Chemical Properties for "ARG Metolachlor Technical"				
CGLN	Requirement	MRID No	Status	Result or Deficiency
830.7840	Solubility in water & in organic solvents	51189609	A	Water (pH 5.60) = 492.27 mg/L Miscible in MeOH, n-Octanol & n-hexane
830.7950	Vapor pressure	51189609	A	9.2 m Pa @ 20°C 16.4 mPa @ 25°C
A = Acceptable; N = unacceptable (see Deficiency); N/A = Not Applicable; G = Data gap; I = In progress. U = Up-grade (additional information required); W = waivers				

### 830.1800 (enforcement analytical method) [MRID No. 51189602]

The Metolachlor TGA1 is dissolved in Acetonitrile and separated on a XDB-C8 reverse phase column. The content of Metolachlor is measured by an HPLC-DAD detector with an external standard quantitative method.

#### Equipment & parameters

The following conditions have been established using an Agilent 1100/1200/1260 chromatograph. Chromatographic conditions may be changed to obtain satisfactory performance with other instruments provided adequate resolution and sensitivity are achieved.

Instrument:	Agilent 1100/1200/1260 HPLC
HPLC Column:	XDB-C8 150×4.6 mm, 5micron
Mobile phase:	Acetonitrile/ water(Phosphoric acid, pH=2.8-3.2)= 70:30
Column Temperature:	30°C
Sample size injected:	5.00 µL
Stop time:	7.00 min
Flow rate:	1 mL/min.
Signal Wavelength:	235 nm
Signal BW:	4 nm
Reference Wavelength:	off
Signal BW:	off
Store spectra:	None (190 nm – 400 nm, for validation of specificity)
Retention Time:	Metolachlor      ca 3.5 min

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CONFIDENTIAL APPENDIX

**Pages 6-27 \*Manufacturing process information may be entitled to confidential treatment\***

